

**Estudios
Técnicos
Inc.**

Economic Impact of the Port of the Americas

Revision
May 2002

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Submitted to:
AFI

May 27, 2002

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Introduction

The purpose of this study is to revise the information included in the study of July, 2001. In this sense, the data was actualized based on its availability.

For the convenience of the reader, the appendix includes the data from the initial report that has not been updated. The report also evaluates the impact of new values in the socioeconomic index of the Region.

The investment proposals are the same and the economic impact based on employment and income are the same. The original data on these functions are also reproduced in the appendix.

Attached to the revised data is included a section detailing the status of the project. Finally, the original considerations in the determination of compliance with the environmental justice finding are compared to the original study.

Actual Status of the Project

The Port of the Americas (PLA) is conceived as a regional project that will impact the entire island of Puerto Rico, due to the improvements in the efficiency of handling maritime shipments. This in turn, will result in benefits to the imports and export business. Also, the existence of the PLA will be an important incentive for industrial activities including assembly and logistics.

As currently conceived, the Request for Qualifications for potential operators of the PTA would be made during the third trimester of 2002, the selection of the Operator would be made during the fourth trimester; and construction would begin during the second trimester of 2004. This itinerary suggests that the investment on off-site infrastructure would be completed in 2005, and the PTA would begin operations in 2006/2007. As previously stated many times, the development would take place in phases, possibly beginning with the modernization of the Port of Ponce.

It is expected that the installations at Ponce and Guayanilla will differ relative to the completed activities, even if the specific composition of each terminal is not fully defined yet.

Regional Demographics

The regional population¹ of the area proposed for the PTA represents about **9.9%** of the population of Puerto Rico, according to the Federal Census of 2000. Similar to 1990, the municipality with the largest population is Ponce, with 186,475 people. The distribution by age group in each municipality of the Region is as follows:

	Age Distribution								
	9 or less	10-19	20-24	25-34	35-44	45-54	55-59	60-74	75 or more
Santa Isabel	4,190	3,761	1,690	3,220	2,569	2,421	994	1,957	863
Peñuelas	4,895	5,313	2,134	3,700	3,530	2,949	1,122	2,116	960
Guayanilla	3,619	4,136	1,886	3,088	2,952	2,839	1,139	2,274	1,139
Guánica	3,557	3,749	1,860	2,828	2,432	2,875	1,167	2,395	1,025
Yauco	7,140	8,192	3,635	6,254	6,403	5,710	2,188	4,582	2,280
Juana Díaz	9,121	9,074	4,135	7,326	6,745	5,590	2,231	4,358	1,951
Ponce	29,639	31,986	15,806	24,838	23,387	22,481	8,936	19,664	9,738
Puerto Rico	600,568	619,236	301,191	534,332	515,663	463,036	188,883	401,515	184,186

Source: Census 2000

In the population segment of 20-29 years, Peñuelas is the regional municipality that has experienced the most growth, with rates much higher than the average of 0.8 % per year for Puerto Rico. In general, the Region has experienced an aging of the population.

Average annual growth relative to 1990				
20-24	25-34	35-44	45-54	55-59
1.3%	2.2%	0.7%	3.6%	4.1%
2.4%	1.2%	2.4%	4.4%	4.0%
1.3%	0.7%	0.9%	2.7%	3.8%
2.5%	1.8%	-1.1%	3.7%	3.4%
1.0%	0.4%	1.5%	4.0%	-9.2%
1.1%	1.1%	1.7%	3.8%	4.5%
0.7%	-0.6%	-0.2%	2.5%	1.6%
0.5%	0.2%	1.1%	2.6%	2.9%

¹ The region includes the municipalities of Peñuelas, Santa Isabel, Juana Díaz, Yauco, Guánica, Guayanilla and Ponce.

In year 2000, Ponce continued to be the main population center of the Region, with about 50% of all the population segments. During the same period, Peñuelas increased its overall population statistics by about 1% in each category. For the segment of 20 to 59 years, the changes in the regional concentrations for each category were as follows:

	Percent change by segment (1990-2000)				
	20- 24	25-34	35-44	45-54	55-59
Santa Isabel	0.2%	1.9%	0.2%	0.5%	4.1%
Peñuelas	1.3%	1.0%	1.9%	1.2%	4.0%
Guayanilla	0.2%	0.4%	0.4%	-0.4%	3.8%
Guánica	1.4%	1.6%	-1.6%	0.6%	3.4%
Yauco	-0.1%	0.2%	1.0%	0.9%	-9.1%
Juana Díaz	0.1%	0.8%	1.2%	0.7%	4.6%
Ponce	-0.4%	-0.8%	-0.7%	-0.6%	1.6%

Source: Census 1990, 2000

These data suggest that part of the population from Ponce has begun to relocate to the nearby municipalities. If this is correct, it means that the demand for basic services, e.g., hospitals, housing, schools, business, should increase slightly in the municipalities of Peñuelas, Guayanilla and Juana Díaz. In fact, it is estimated that for year 2010, the population of the Region will be as follows:

	2000	2010	Change*
Santa Isabel	21,665	23,625	0.87%
Peñuelas	26,719	30,917	1.47%
Guayanilla	23,072	24,204	0.48%
Guánica	21,888	23,892	0.88%
Yauco	46,384	50,281	0.81%
Juana Díaz	50,531	56,989	1.21%
Ponce	186,475	185,916	-0.03%

Source: Census 2000, Estimates by Estudios Técnicos, Inc.

* : Average annual change

If the wards near the areas proposed for the development of the PTA² are considered, the percent of the *municipal* population by age segment in 2000 were as follows:

	Concentration by population segment in each municipality								
	9 o menos	10 a 19	20 a 24	25 a 34	35 a 44	45 a 54	55 a 59	60 a 74	75 o más
Boca-Guayanilla	4.81%	5.17%	6.57%	5.60%	4.37%	6.48%	3.38%	5.72%	5.09%
Indios-Guayanilla	11.08%	11.17%	9.76%	9.68%	11.96%	9.44%	4.26%	8.44%	7.29%
Playa - Guayanilla	6.22%	6.07%	4.98%	5.34%	5.52%	4.58%	2.90%	6.73%	6.15%
Rufina-Guayanilla	1.24%	0.75%	0.74%	0.84%	0.85%	1.09%	0.35%	0.84%	0.97%
Encarnación-Peñuelas	4.04%	4.42%	5.11%	4.70%	4.99%	5.90%	5.70%	7.84%	5.00%
Tallaboa Poniente-Peñuelas	2.17%	2.30%	2.72%	2.14%	2.58%	3.19%	3.21%	3.36%	4.17%
Bucaná-Ponce	1.82%	2.19%	2.38%	1.92%	2.17%	3.20%	1.14%	1.70%	1.08%
Cañas-Ponce	19.54%	19.90%	21.18%	20.19%	19.40%	18.57%	8.02%	12.82%	9.04%
Capitanejo-Ponce	0.79%	0.72%	0.76%	0.60%	0.77%	0.87%	0.37%	0.69%	0.97%
Playa - Ponce	8.80%	9.49%	9.36%	8.72%	8.62%	9.85%	5.00%	8.83%	7.98%
Vayas-Ponce	0.70%	0.66%	0.65%	0.68%	0.78%	0.74%	0.33%	0.89%	0.70%

Source: Census, 2000

The data in the table shows that some wards are densely populated, in the vicinity of the areas proposed for the development of the PTA, such as Cañas at Ponce and Indios at Guayanilla. In particular, in the 20-29 year segment, there is a significant concentration in the vicinity of the Port of Ponce (approximately 20% of the municipal population lives in the Cañas Ward). Additional data on the populations are included in the appendix, including at the scale of the ward, municipal and regional.

Laboral mobility in the Region

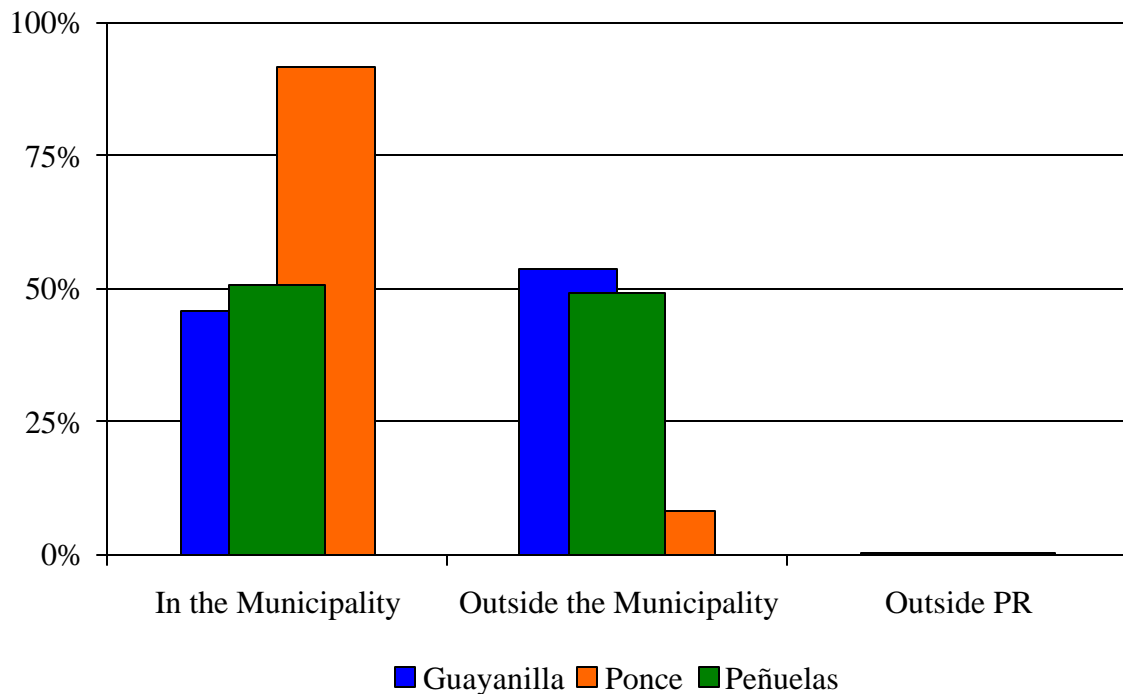
In 1990, the labor force in the pertinent wards that relocated included:

2 These wards include Boca, Indios, Playa and Rufina at Guayanilla; Encarnación and Tallaboa Poniente at Peñuelas, and Bucaná, Cañas, Capitanejo, Playa and Vayas at Ponce.

	Percent that works		
	In the municipality	Outside the municipality	Outside PR
Boca-Guayanilla	52.2%	47.8%	0.0%
Indios-Guayanilla	48.3%	50.3%	1.3%
Playa - Guayanilla	71.7%	28.3%	0.0%
Rufina-Guayanilla	68.8%	31.3%	0.0%
Encarnación-Peñuelas	50.4%	49.6%	0.0%
Tallaboa Poniente-Peñuelas	44.0%	56.0%	0.0%
Bucaná-Ponce	88.7%	10.5%	0.8%
Cañas-Ponce	89.2%	10.5%	0.3%
Capitanejo-Ponce	88.8%	11.2%	0.0%
Playa - Ponce	91.2%	8.5%	0.3%
Vayas-Ponce	92.3%	7.7%	0.0%

Source: Census 1990

In 1990, the percent of mobility in each municipality were as follows:



If it's assumed that the percent of workers that labor in the same municipality continue being the same, then in 2001 Ponce included **47,391** laborers, while Guayanilla and Peñuelas were **3,125** y **3,250** respectively. Evidently, the municipality of Ponce continues to be the main labor source in the Region.

Housing demand in the Region

The most important factors in the housing demand are personal income and population growth. Changes in the personal income or increases in population induce changes in the demand for housing, irrespective of the general credit conditions. Housing demands were estimated as follows:

	<u>Housing demand projections (2001-2006)</u>	
	Aumento total	Fuera del mercado
Peñuelas	628	317
Guayanilla	606	337
Ponce	4,856	2,465
Puerto Rico	20,640	9,609

Source: Estudios Técnicos, Inc.

The column that denotes houses outside of the market represents units that will not be paid with personal income, but with public income, i.e., houses paid with public funds. For the same period, it is expected that the percent of housing paid with personal funds will be less than the average for Puerto Rico. This indicates that the individuals in these municipalities do not have the economic capacity to pay the cost of their houses at the same rate as other people in Puerto Rico.

	<u>Percent units purchased</u>	
	Outside the market	In the market
Peñuelas	50.6%	49.4%
Guayanilla	55.7%	44.3%
Ponce	50.8%	49.2%
Puerto Rico	46.6%	53.4%

Source Estudios Técnicos, Inc.

This deficit in the purchase of individual homes indicates a characteristic of poverty in the Region.

Revision of Socioeconomic data

The revision of the analyses in the original study was made using the new data available from the 2000 Census released in May 2002. To avoid any confusion, in this section we present the revisions based on the new data, while the variables for which updates are not available are included in the appendix.

Revision of the regional data

The variables for which new information are available include the following:

1. Per-capita income
2. Unemployment rate

Income indicators

The revision of the income indicators show the following data:

	Population (2000)		Average Salary [^] (2000)		Income per capita (2000)	
		Change*		Change*		Change*
Santa Isabel	21,665	1.15%	\$ 9,376	5.56%	\$ 6,028	-1.14%
Peñuelas	26,719	1.73%	\$ 12,969	12.98%	\$ 5,843	-1.70%
Guayanilla	23,072	0.67%	\$ 12,194	16.67%	\$ 6,588	-0.67%
Guánica	21,888	0.91%	\$ 10,734	18.82%	\$ 6,108	-0.91%
Yauco	46,384	0.98%	\$ 9,419	3.37%	\$ 6,931	-0.97%
Juana Díaz	50,531	1.12%	\$ 9,697	6.33%	\$ 6,000	-1.11%
Ponce	186,475	-0.07%	\$ 11,669	-14.23%	\$ 9,770	0.07%

Source: Census 2000, DTRH, Industrial Composition, 2000, Estimados Estudios Técnicos, Inc.

* : Average annual change (1990-2000)

[^] : by laborer

The most significant of the new data are the average salaries. While in Ponce the average salary for each worker decreased by about **-14.23%** per year, at Guayanilla and Peñuelas it increased by **16.67%** and **12.98%**, respectively for the same period. On the other hand, the per-capita income has remained essentially at the same level as in 1990, which suggests that in the areas near Ponce the salaries have increased in absolute terms at a rate higher than inflation. In comparison, it is reasonable to expect that in Ponce the jobs with average higher salaries increased proportionally more than the median salaries. This

implies that in Ponce, although there are less jobs than in 1990 and less absolute population and employees, the municipal income per capita has remained relatively stable.

Unemployment Rate

In 2001, the average number of workers in the region was **97,100**, with Ponce the municipality with the largest number of workers, with an average of **51,800**. The regional unemployment was as follows:

	Labor force [^]	Unemployment rate [^]	Change in unemployment rate [*]
Santa Isabel	5,200	21.3%	10.4%
Peñuelas	7,600	16.2%	0.6%
Guayanilla	7,900	14.4%	2.1%
Guánica	5,900	21.3%	21.0%
Yauco	13,600	15.3%	7.7%
Juana Díaz	14,200	15.8%	11.3%
Ponce	59,300	12.7%	3.3%

Source: DTRH

[^]: Average 2001

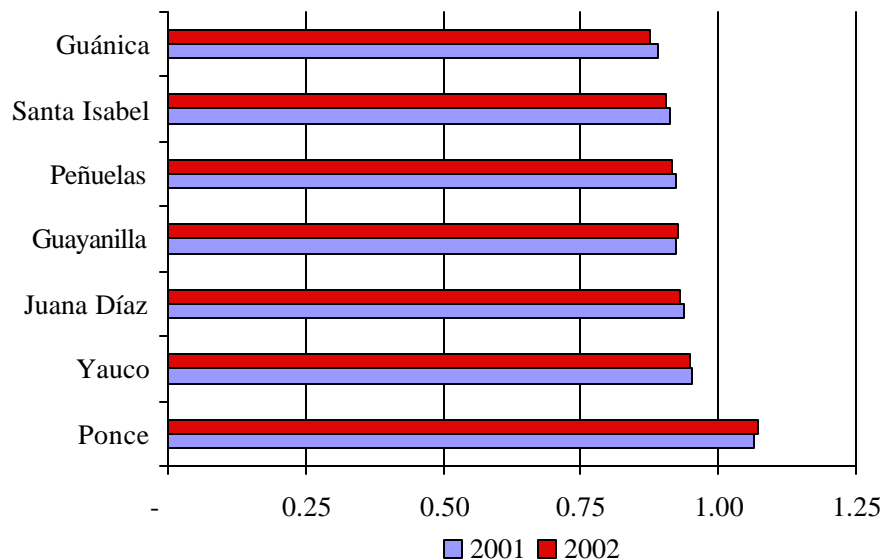
^{*}: Change 2000-2001

The most important element of the employment patterns is that the regional unemployment increased 8.1 % in 2001. In particular, the municipalities of Santa Isabel, Guánica and Juana Díaz show a sharp increase of unemployment, an average of **14.2%**, while for the municipalities in the immediate vicinity of the PTA, i.e. Peñuelas, Guayanilla and Ponce, the unemployment increase was less, averaging **2%**. In any event, the conclusion is that in year 2001 there were less people employed than in 2000. It needs to be determined if this change in the regional labor market is a transient change, or represents a permanent condition in the Region. For now, the initial data for March 2002 indicate that the regional employment is recuperating.

Socioeconomic index in the Region

The socioeconomic index in the Region was calculated with the new data. The general trend was the same as in 2001, with Ponce showing an index higher than the average, while the other municipalities were below the average. The change in the regional average induced by the new data was **-48%**. The largest percent change occurred in Ponce, with a **+0.68%**, while Guánica decreased **-1.30%**. In general, with the exception of Guayanilla, the index in the municipalities near Ponce decreased, except at Guayanilla.

New Socioeconomic Index of the Region



It is important to remember that the changes in the index were induced by the new data on unemployment rate and per capita income in the municipalities of the Region.

Environmental Justice Determination

Updating of the data induced a slight decrease in the socioeconomic indexes in the original study. However, this small change did not alter the general tendency in the original study: Ponce continues to exhibit a higher regional index of 1.07 (0.68 % less than the original index), while the other municipalities continue below the regional average.

This minor decrease on the regional socioeconomic index (from -1.30% to -.56%, except in Ponce and Guayanilla), was due primarily to the decrease in the general economic conditions observed in the Region in 2001 as compared to 2000. In fact, the employment rate increased in all the municipalities during this period.

Based on this analysis, it can be concluded that the slight decrease in the socioeconomic index of the Region is not due to any discrimination that the PTA may impose, but to a general decay of the labor market during the 2000-2001 period. There is no apparent change in the potential environmental impacts of the PTA as proposed, since the elements of the project are the same.

Conclusions

The new data did not alter the socioeconomic index significantly. The index decreased slightly, except in Ponce, as a result of a decrease in the labor market during 2000-2001. However, it is not expected that this increase in unemployment will be permanent.

The revision of the data did not result in changes in the potential environmental impacts for the PTA to the communities in the areas adjoining the project. In this sense, there is no reason to expect discrimination against the adjacent communities for the location of the PTA. On the contrary, the construction and eventual operation of the PTA will generate permanent employment and income to areas historically suffering from low employment, such as Peñuelas and Guánica.

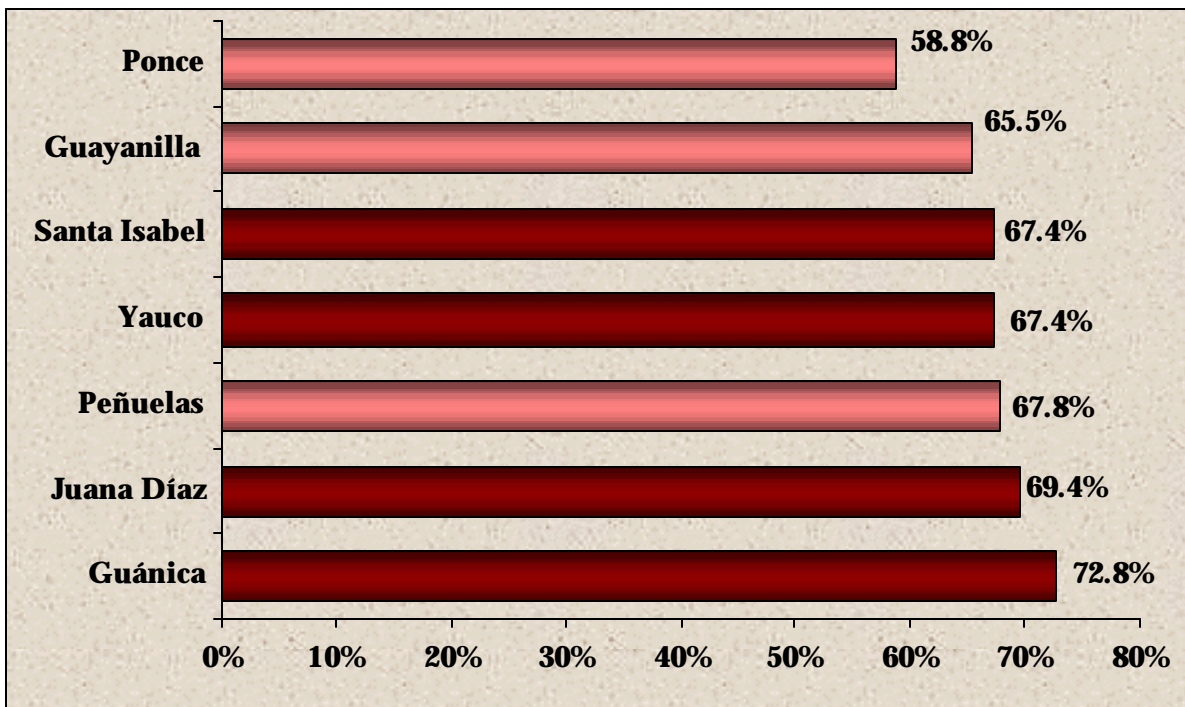
Appendix

For the benefit of the reader, the socio-economic data that did not change from the initial study are included here. More current data are not available at this time.

Regional Information

Level of poverty

Percent of families below the poverty level



Homes that receive public assistance

Municipality	Homes	Homes that Receive Public Assistance	% In the Municipality
Ponce	54,314	17,925	33.0%
Peñuelas	5,893	2,453	41.6%
Guayanilla	6,030	2,550	42.3%
Guánica	5,913	2,563	43.3%
Juana Díaz	12,031	5,269	43.8%
Yauco	12,243	5,466	44.6%
Santa Isabel	5,463	2,509	45.9%
Region	101,887	38,735	38.0%

Source: Census 1990

People with ability to read and write

Municipality	Population 10 years +	Ability to Read and write	% of Municipality
Yauco	34,005	30,879	90.8%
Juana Díaz	36,508	32,683	89.5%
Guánica	16,437	14,712	89.5%
Ponce	152,451	135,955	89.2%
Guayanilla	17,408	15,255	87.6%
Peñuelas	17,436	15,003	86.0%
Santa Isabel	15,411	12,593	81.7%
Region	289,656	257,080	88.8%

Source: Census 1990

Level of education

Municipality	Population 25 years +	Graduate of High School or Post-Secondary	% Municipality
Ponce	100,173	51,411	51.3%
Juana Díaz	22,661	10,07	44.5%
Guayanilla	11,358	4,917	43.3%
Santa Isabel	9,633	4,168	43.3%
Yauco	22,119	9,320	42.1%
Guánica	10,601	4,361	41.1%
Peñuelas	11,045	4,443	40.2%
Region	187,590	88,698	47.3%

Source: Census 1990

Incidence of house ownership or rented

Municipality	# of Occupied	Occupied by Owner		Rented Units	
	Homes	Units	% Municipality	Units	% Municipality
Peñuelas	7,698	6,250	81.2%	1,448	18.8%
Guayanilla	7,209	5,825	80.8%	1,384	19.2%
Juana Díaz	14,954	12,015	80.3%	2,939	19.7%
Yauco	15,012	11,552	77.0%	3,460	23.0%
Santa Isabel	6,781	5,189	76.5%	1,592	23.5%
Guánica	7,291	5,518	75.7%	1,773	24.3%
Ponce	59,607	41,561	69.7%	18,046	30.3%
Region	118,552	87,910	74.2%	30,642	25.8%

Source: Census 2000

Condition of Housing

Municipality	Total Housing	Units considered adequate	% of the Municipality
Santa Isabel	6,315	5,615	88.9%
Guánica	7,563	6,572	86.9%
Yauco	14,082	12,026	85.4%
Ponce	60,212	51,137	84.9%
Juana Díaz	13,496	11,366	84.2%
Guayanilla	6,922	5,737	82.9%
Peñuelas	6,821	5,479	80.3%
Region	115,411	97,932	84.9%

Source: Census 1990

Median Value of Housing

Municipality	Total Housing	% Municipality	Median Value
Ponce	60,212	52.2%	\$33,500
Santa Isabel	6,315	5.5%	\$22,700
Yauco	14,082	12.2%	\$22,600
Juana Díaz	13,496	11.7%	\$20,600
Guánica	7,563	6.6%	\$18,800
Guayanilla	6,922	6.0%	\$17,100
Peñuelas	6,821	5.9%	\$16,400
Región	115,411	100.0%	\$26,781

Source: Census 1990

Homes that receive Social Security

Municipality	Homes	Homes that Receive Social Security	% Municipality
Peñuelas	5,893	1,714	29.1%
Yauco	12,243	3,570	29.2%
Ponce	54,314	15,986	29.4%
Santa Isabel	5,463	1,619	29.6%
Juana Díaz	12,031	3,693	30.7%
Guayanilla	6,030	1,927	32.0%
Guánica	5,913	1,890	32.0%
Región	101,887	30,399	29.8%

Source: Census 1990

Population Growth 1990-2000

Population in the Region

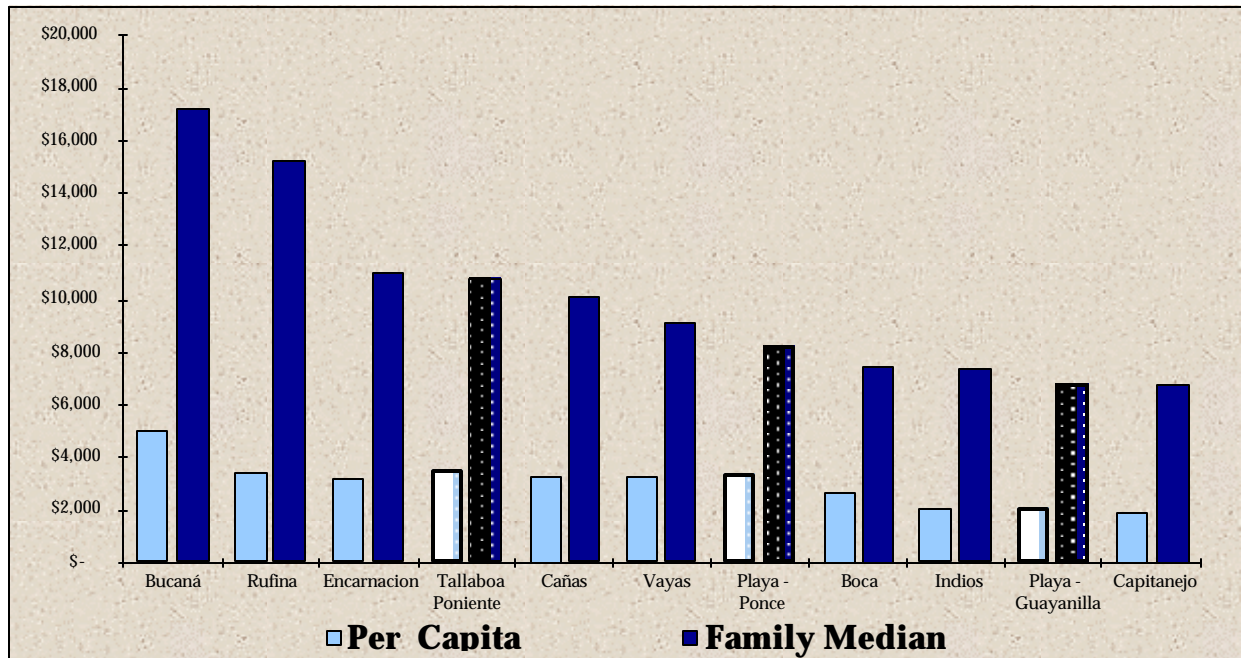
Municipality	Population 1990	Population 2000	Percent in Municipality
Peñuelas	22,515	26,719	18.7%
Santa Isabel	19,318	21,665	12.1%
Juana Díaz	45,198	50,531	11.8%
Yauco	42,058	46,384	10.3%
Guánica	19,984	21,888	9.5%
Guayanilla	21,581	23,072	6.9%
Ponce	187,749	186,475	-0.7%
Región	358,403	376,734	5.1%

Source: Census 2000

Information at the ward level

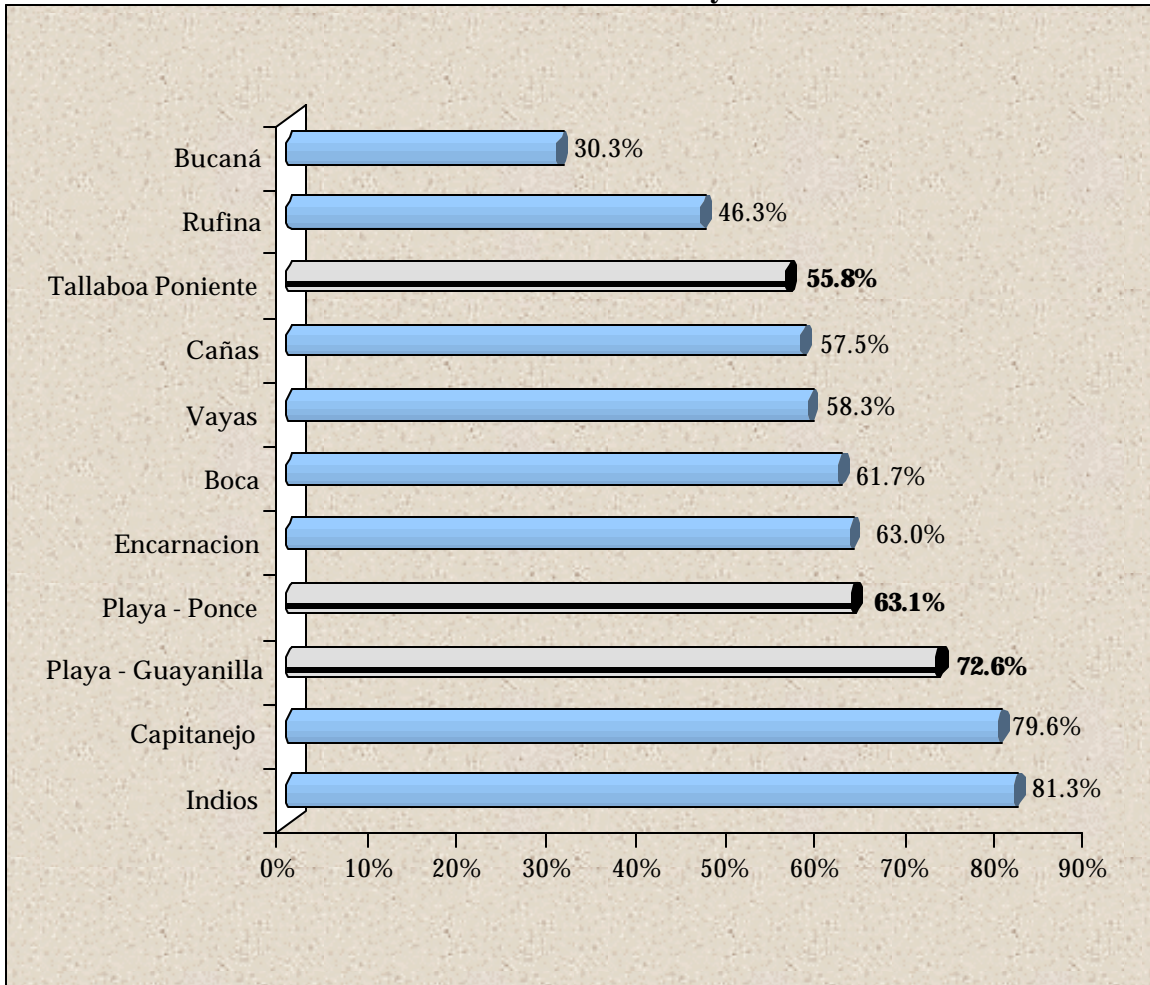
Income indicators

Income per capita and family median



Poverty level

Families Below the Poverty Level



Public assistance

Homes that Receive Public Assistance

Wards	Homes	Homes that get Assistance	Percent in Ward (%)
Bucaná	1,142	195	17.1%
Encarnacion	337	65	19.3%
Caña	7,660	2,237	29.2%
Tallaboa	173	52	30.1%
Vayas	356	112	31.5%
Playa - Ponce	5,051	1,730	34.3%
Capitanejo	314	126	40.1%
Rufina	60	27	45.0%
Indio	620	308	49.7%
Playa - Guayanilla	364	187	51.4%
Boca	392	224	57.1%
Area de estudio	16,469	5,263	32.0%

Source: Census1990

Social Security

Ward	Homes	Homes Receiving Social Security	Percent in the Ward
Vayas	356	57	16.0%
Cañas	7,660	1,650	21.5%
Bucaná	1,142	249	21.8%
Playa - Guayanilla	364	81	22.3%
Playa - Ponce	5,051	1,326	26.3%
Indios	620	176	28.4%
Tallaboa	173	59	34.1%
Encarnacion	337	133	39.5%
Boca	392	155	39.5%
Capitanejo	314	129	41.1%
Rufina	60	39	65.0%
Area de estudio	16,469	4,054	24.6%

Source: Census 1990

Education Level

Wards	Population Older than 25	High School Graduates	% of Ward
Bucaná	2,151	1,606	74.7%
Cañas	14,358	7,609	53.0%
Playa - Ponce	9,335	4,616	49.4%
Encarnacion	645	279	43.3%
Tallaboa Poniente	338	141	41.7%
Vayas	625	240	38.4%
Boca	775	297	38.3%
Indios	1,191	444	37.3%
Capitanejo	622	178	28.6%
Playa - Guayanilla	623	163	26.2%
Rufina	166	20	12.0%
Study Area	30,829	15,593	50.6%

Source: Census 1990

People with ability to read and write

Wards	Population 10 years or older	Ability to read and write	% of the Ward
Bucaná	3,345	3,253	97.2%
Capitanejo	991	954	96.3%
Boca	1,137	1,090	95.9%
Indios	1,805	1,717	95.1%
Rufina	216	201	93.1%
Encarnacion	948	881	92.9%
Cañas	23,411	21,500	91.8%
Playa - Ponce	14,432	13,251	91.8%
Playa - Guayanilla	980	895	91.3%
Tallaboa Poniente	462	420	90.9%
Vayas	997	733	73.5%
Study Area	48,724	44,895	92.1%

Source: Census 1990

Housing median value

Wards	Housing Units	% in Municipality	Median Value
Bucaná	1,185	6.4%	\$ 45,100
Playa - Ponce	5,462	29.4%	\$ 36,100
Cañas	8,954	48.1%	\$ 28,800
Vayas	409	2.2%	\$ 20,600
Encarnacion	420	2.3%	\$ 19,400
Boca	409	2.2%	\$ 17,000
Capitanejo	309	1.7%	\$ 15,800
Indios	738	4.0%	\$ 15,100
Playa - Guayanilla	441	2.4%	\$ 13,100
Tallaboa Poniente	204	1.1%	\$ 12,500
Rufina	72	0.4%	\$ 9,999
Study Area	18,603	100.0%	\$ 22,600

Source: Census 1990

Housing condition

Ward	Total Housing	Houses in Adequate Condition	% Ward
Rufina	72	72	100.0%
Capitanejo	309	309	100.0%
Bucaná	1,185	1,168	98.6%
Tallaboa	204	193	94.6%
Boca	409	384	93.9%
Playa - Ponce	5,462	4,852	88.8%
Cañas	8,954	7,559	84.4%
Encarnacion	420	349	83.1%
Indio	738	583	79.0%
Playa - Guayanilla	441	286	64.9%
Vaya	409	246	60.1%
Study Area	18,603	16,001	86.0%

Source: Census 1990

Houses occupied by owners versus rented

Wards	Total Housing	Occupied by Owner		Rented	
	In Use	Units	% of Ward	Units	% of Ward
Rufina	54	54	100.0	-	0.0%
Boca	372	337	90.6	35	9.4%
Playa - Guayanilla	377	319	84.6	58	15.4%
Bucaná	1,137	952	83.7	185	16.3%
Indios	644	520	80.7	124	19.3%
Cañas	7,627	6,146	80.6	1,481	19.4%
Tallaboa	172	137	79.7	35	20.3%
Capitanejo	309	245	79.3	64	20.7%
Vayas	345	268	77.7	77	22.3%
Playa - Ponce	5,071	3,502	69.1	1,569	30.9%
Encarnacion	326	218	66.9	108	33.1%
Study Area	16,434	12,698	77.3%	3,736	22.7%

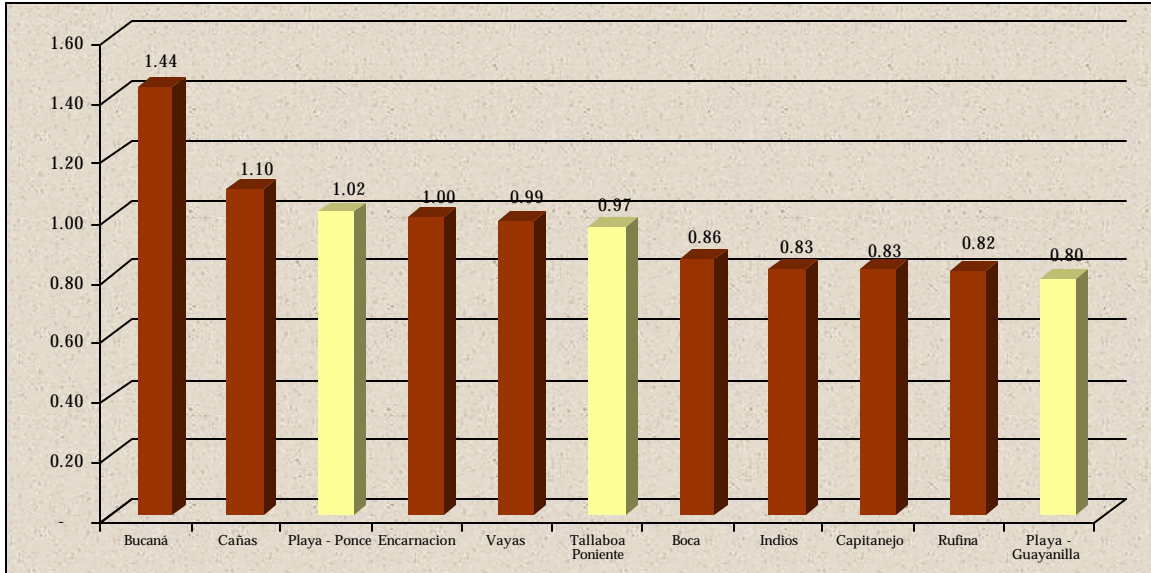
Source: Census 1990

Population growth 1990-2000

Wards	Population	Population	Growth
	1990	2000	1990 - 2000
Capitanejo	1,089	1,404	28.9%
Cañas	29,146	34,065	16.9%
Encarnacion	1,156	1,344	16.3%
Vayas	1,153	1,338	16.0%
Tallaboa	641	697	8.7%
Indio	2,318	2,339	0.9%
Playa - Guayanilla	1,326	1,317	-0.7
Bucaná	4,053	3,963	-2.2%
Rufina	220	210	-4.5%
Boca	1,330	1,263	-5.0%
Playa - Ponce	18,027	16,926	-6.1%
Study Area	60,459	64,866	7.3%

Source: Census 1990 y 2000.

Index of the Socioeconomic Situation in the Region and Wards in the Study Area



Economic Analysis

The data about the investment of the Port of the Americas have not changed since July, 2001. For the convenience of the reader, the data on the impacts on jobs and income calculated in the original study are reproduced here.

Economic impact of the construction phase

Economic Impact of the Construction Phase

Parameter

Jobs

Coefficient of direct employment	27.53
Coefficient of direct and indirect employment	36.32
Coefficient of direct, indirect and induced employment	59.09

Income

Coefficient of direct income	0.19
Coefficient of direct and indirect income	0.29
Coefficient of direct, indirect and induced income	0.48

INVESTMENTS

Investment on proposed construction (\$M)	\$401
Investment in proposed construction (\$M in 1982 \$)*	\$203.0

DIRECT, INDIRECT AND INDUCED IMPACT

Jobs

Direct Jobs (number)	5,588
Direct plus indirect (number)	7,373
Direct, indirect and induced (number)	11,995

Income

Indirect income (M \$)	\$76.2
Direct and indirect (M \$)	\$116.3
Direct, indirect and induced (M \$)	\$192.5

* To apply the multipliers of employment to the value of the investments, these are converted to 1982 prices (date of the available coefficients). This is obtained by dividing the investment by 1.98 of inflation accumulated in Puerto Rico during 1982-2000.

Source: Estudios Técnicos, Inc. and Interindustrial Multipliers, Puerto Rico Planning Board.

Economic impact of the regular operations: first year

**Economic impact of the operational phase of the PTA
First year (600,000 TEU)**

PARAMETERS

Jobs

Multiplier of employment Type I (direct and indirect impact)	2.81
Multiplier of employment Type II (direct, indirect and induced)	7.26

Income

Multiplier of employment Type I (direct and indirect impact)	1.23
Multiplier of employment Type II (direct, indirect and induced)	1.91

DIRECT IMPACT

Estimated annual direct employment	528
Estimated annual income (mill. \$)	\$9.273

INDIRECT AND INDUCED IMPACT

Employment, direct and indirect	1,484
Employment, direct, indirect and induced	3,833
Income, direct and indirect (mill. \$)	\$11.40
Income, direct, indirect and induced (mill. \$)	\$17.71

Source: Estudios Técnicos, Inc.: Interindustrial multipliers of 1987 and 1982, Puerto Rico Planning Board
PR Department of Labor and Human Resources Occupational Employment and Wage Survey for PR 1998.

Economic impact of the operational phase: After ten years

Economic impact of the operational phase of the PTA
Year 10 - (2,300,000 TEU)

PARAMETERS

Employment

Multiplier of employment Type I (direct and indirect impact)	2.81
Multiplier of employment Type II (direct, indirect and induced)	7.26

Income

Multiplier of employment Type I (direct and indirect impact)	1.23
Multiplier of employment Type II (direct, indirect and induced)	1.91

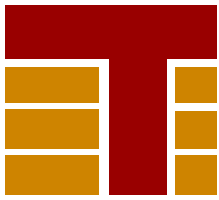
IMPACT

Employment, direct annual estimate	1,511
Estimated annual income (mill. \$)	\$25.69

INDIRECT AND INDUCED IMPACT

Employment, direct and indirect	4,246
Employment direct, indirect and induced	10,970
Income, direct and indirect (mill. \$)	\$31.60
Income, direct, indirect and induced (mill. \$)	\$49.08

Source: Estudios Técnicos, Inc.; Interindustrial Multipliers of 1987 v 1982. Puerto Rico Planning Board
PR Department of Labor and Human Resources. Occupational Employment and Wage Survey for PR



**Estudios
Técnicos
Inc.**

Economic Impact of the Port of the Americas

Addendum

June 2002

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June 14, 2002

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The data recently published by the Census 2000 reflect some changes that update the regional socioeconomic index. Following, details of the variables for which there is revised information.

Poverty level

% OF FAMILIES BELOW THE POVERTY LEVEL

Municipality	1990	2000	Annual Growth
Guánica	72.8	59.9	-1.94%
Peñuelas	67.8	56.1	-1.88%
Guayanilla	65.5	54.9	-1.75%
Santa Isabel	67.4	53.6	-2.26%
Yauco	67.4	52.7	-2.43%
Juana Díaz	69.4	52.6	-2.74%
Ponce	58.8	47.9	-2.03%

Source: Census 1990, 2000

Clearly, the general poverty conditions of the Region have decreased at an annual average of **-1.95%**, in the area adjacent to the Port of the Americas, i.e. Peñuelas, Ponce and Guayanilla.

Public Assistance

HOUSEHOLDS RECEIVING PUBLIC ASSISTANCE

Municipality	1990			2000		
	Households	Households receiving assistance	% of municipality	Households	Households receiving assistance	% of municipality
Ponce	54,314	17,925	33.0%	59,607	14,460	24.3%
Peñuelas	5,893	2,453	41.6%	7,698	1,985	25.8%
Guayanilla	6,030	2,550	42.3%	7,209	1,764	24.5%
Guánica	5,913	2,563	43.3%	8,849	2,002	22.6%
Juana Díaz	12,031	5,269	43.8%	14,954	3,825	25.6%
Yauco	12,243	5,466	44.6%	15,012	3,329	22.2%
Santa Isabel	5,463	2,509	45.9%	6,781	1,586	23.4%
Region	101,887	38,735	38.0%	120,110	28,951	24.1%

Source: Census 1990, 2000

The decrease of the number of families that received public assistance recorded for 2000 is consistent with the decrease in the number of families below the poverty level recorded for the same period. In fact, the proportion of families that received public assistance, at municipal level, also decreased.

HOUSEHOLDS RECEIVING PUBLIC ASSISTANCE

Municipality	Average growth
Ponce	-3.03%
Peñuelas	-4.68%
Guayanilla	-5.32%
Guánica	-6.29%
Juana Díaz	-5.24%
Yauco	-6.76%
Santa Isabel	-6.53%
Región	-4.45%
<i>Source: Census 1990, 2000</i>	

It means that, for the area adjacent to the Port of the Americas, the annual average reduction was **-4.34%**.

Education Level

The indices for the education level improved for all the municipalities.

EDUCATION LEVEL

Municipality	1990			2000		
	Population 25 years +	Graduated from high school or post secondary level	% municipality	Population 25 years +	Graduated from high school or post secondary level	% municipality
Ponce	100,173	51,411	51.3%	109,303	67,112	61.4%
Juana Díaz	22,661	10,078	44.5%	28,180	16,429	58.3%
Guayanilla	11,358	4,917	43.3%	13,425	7,478	55.7%
Santa Isabel	9,633	4,168	43.3%	12,138	7,210	59.4%
Yauco	22,119	9,320	42.1%	27,298	15,232	55.8%
Guánica	10,601	4,361	41.1%	12,707	6,468	50.9%
Peñuelas	11,045	4,443	40.2%	14,449	7,817	54.1%
Region	187,590	88,698	47.3%	217,500	127,746	58.7%

Source: Census 1990, 2000

Notice that the increase in the number of graduates was greater than the growth of the population 25 years old or more. This implies that the proportion of adults with high school education increased for the 1990-2000 decade. Therefore, the level of education of the workforce improved at regional level.

AVERAGE ANNUAL GROWTH

Municipality	Graduated from high school or post secondary level		
	Population 25 years +	school or post secondary level	%
Ponce	0.88	2.70	1.81
Juana Díaz	2.20	5.01	2.74
Guayanilla	1.69	4.28	2.55
Santa Isabel	2.34	5.63	3.22
Yauco	2.13	5.04	2.85
Guánica	1.83	4.02	2.15
Peñuelas	2.72	5.81	3.01
Region	1.49%	3.72%	2.19%

Source: Census 1990, 2000

The average growth of the number of graduates from high school or higher levels increased to **4.26%**, which is slightly higher than the annual growth of the Region. Again, the growth was higher than the average growth of the population 25 years old or more in the Region, which was **1.76%**.

Housing Units Median Value

The median value of the housing units in the Region increased in a proportion greater than the number of housing units. In fact, the difference in the annual growth rate was **7.40%**. This also suggests an improvement on the standard quality of life in the Region. More expensive housing units are being constructed.

MEDIAN VALUE OF HOUSING UNITS

Municipality	1990			2000		
	Total housing units	% of the region	Median value	Total housing units	% of the region	Median value
Ponce	60,212	52.2%	\$33,500	66,471	49.9%	\$71,200
Santa Isabel	6,315	5.5%	\$22,700	7,569	5.7%	\$59,600
Yauco	14,082	12.2%	\$22,600	17,062	12.8%	\$57,500
Juana Díaz	13,496	11.7%	\$20,600	16,490	12.4%	\$56,800
Guánica	7,563	6.6%	\$18,800	8,849	6.6%	\$50,000
Guayanilla	6,922	6.0%	\$17,100	8,147	6.1%	\$51,200
Peñuelas	6,821	5.9%	\$16,400	8,735	6.6%	\$49,400
Región	115,411	100.0%	\$26,781	133,323	100.0%	\$62,541

Source: Census 1990, 2000

The annual average growth of the housing units median value, for the area adjacent to the Port of the Americas, was **10.36%**. This represents 8.65% more than the annual average growth of the housing units in the Region, i.e. **1.71%**, for the same decade. Again, this indicates that, not only more expensive housing units are being constructed but that the standard quality of life in the Region has improved.

ANNUAL AVERAGE GROWTH

Municipality	Total housing units	% of the region	Median value
Ponce	0.99	-	7.83
Santa Isabel	1.83	0.37	10.13
Yauco	1.94	0.48	9.79
Juana Díaz	2.02	0.56	10.67
Guánica	1.58	0.13	10.28
Guayanilla	1.64	0.19	11.59
Peñuelas	2.50	1.04	11.66
Región	1.45%	0.00%	8.85%

Source: Census 1990, 2000

Households Receiving Social Security Benefits

The number of families in the Region that received benefits from the Social Security Administration increased annually 1.68% more than the proportion of households that received benefits at municipal level. This implies that, even when the total number of households increased, the social situation improved in general since the proportion of households that requested assistance from the Social Security Administration increased at a lower rate.

HOUSEHOLDS THAT RECEIVE SOCIAL SECURITY

Municipality	1990			2000		
	Households	Households that receive Social Security	% municipality	Households	Households that receive Social Security	% municipality
Peñuelas	5,893	1,714	29.1%	7,698	2,489	32.3%
Yauco	12,243	3,570	29.2%	15,012	5,009	33.4%
Ponce	54,314	15,986	29.4%	59,607	20,209	33.9%
Santa Isabel	5,463	1,619	29.6%	6,781	2,394	35.3%
Juana Díaz	12,031	3,693	30.7%	14,954	4,727	31.6%
Guayanilla	6,030	1,927	32.0%	7,209	2,439	33.8%
Guánica	5,913	1,890	32.0%	8,849	2,598	29.4%
Region	101,887	30,399	29.8%	120,110	39,865	33.2%

Source: Census 1990, 2000

The growth of households that received benefits from the Social Security Administration for the area adjacent to the Port of the Americas was less, **0.05%**, than the regional average, whereas the annual average growth of households that requested benefits was **2.85%**. However, the growth in the proportion of households that received benefits was less, **1.02%** annual; reflecting an improvement in the standard quality of life similar to the Region.

ANNUAL AVERAGE GROWTH

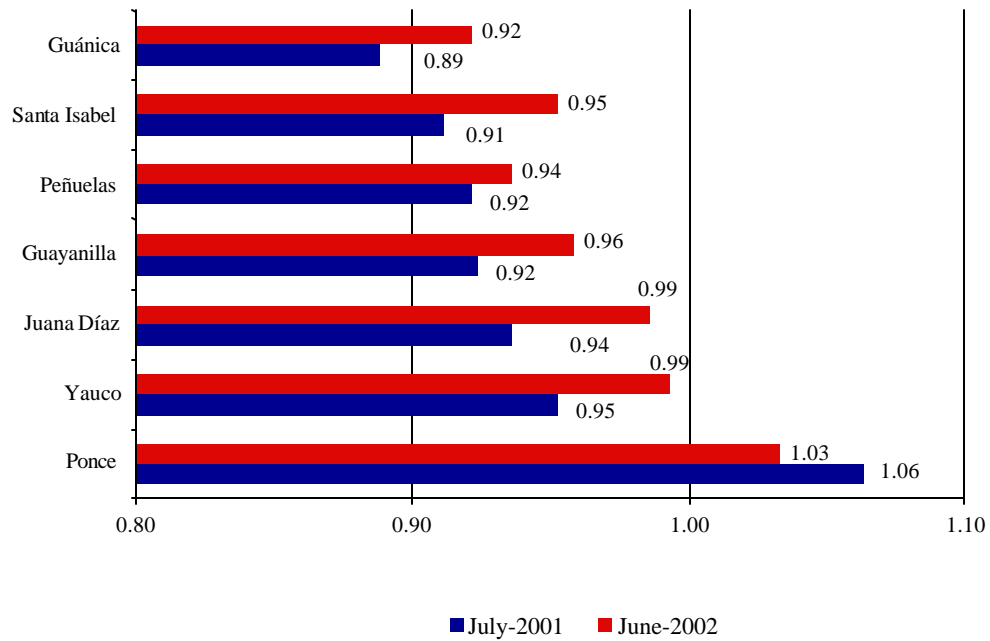
Mun.	Households	Households that receive social security	%Mun.
Peñuelas	2.71	3.80	1.06
Yauco	2.06	3.44	1.36
Ponce	0.93	2.37	1.42
Santa Isabel	2.18	3.99	1.77
Juana Díaz	2.20	2.50	0.29
Guayanilla	1.80	2.38	0.57
Guánica	4.11	3.23	-
Region	1.66%	2.75%	1.07%

Source: Census 1990, 2000

Regional Socioeconomic Index: Revision June 2000

The socioeconomic index of the Region reflected a positive growth for every municipality, except for the larger municipality, Ponce.

SOCIOECONOMIC INDEX OF THE REGION



The general improvement of the socioeconomic index is expected, if considering improvements in the poverty statistics, i.e. poverty level, households receiving public assistance, and level of education.